CLAIMS

1. Process for non-coherent reception of a signal with spectrum spreading and DP-MOK mixed modulation with combination of multiple paths, characterized in that it comprises the following operations:

5   A) the signal is processed in several M channels in parallel; in each channel, the signal is filtered by a filter adapted to a pseudo-random sequence specific to the channel; the energy of the filtered signal is measured; this energy is weighted by a

10   weighting factor; the channel containing the weighted signal with the highest power is determined; the number of this channel is decoded to reproduce the first information symbols (mMOK);

    B) the filtered signal with the highest energy is

15   selected, a differential phase demodulation is made of this signal which produces multiple correlation peaks corresponding to multiple paths; the energy of these peaks is calculated; this energy is weighted by the said weighting factor; this weighted energy is decoded

20   to restore the second information symbols (mDP);

    C) the average of the correlation peaks is taken over a determined duration corresponding to several information symbols, this average forming the said weighting factor acting on the energy of the filtered

25   signal in each channel and on the energy of the correlation peaks.

2. Non-coherent receiver for a signal with spectrum spreading and DP-MOK mixed modulation to make

use of this process according to claim 1, characterized in that it comprises:

A) several M channels in parallel, each channel comprising a filter (201, …, 20M) adapted to a pseudo-random sequence specific to the channel; a circuit (211, …, 21M) for measuring the energy of the filtered signal; a circuit (221, …, 22M) for weighting this energy by a weighting factor; means (230) of determining the channel that contains the weighted signal with the highest energy; a MOK decoder (250) receiving the number of this channel, and in response restoring the first information symbols (mMOK);

B) means (240) of selecting the filtered signal with the highest energy; a differential phase demodulator (260) which produces multiple correlation peaks corresponding to multiple paths; a circuit (130) for weighting the energy of the peaks by the said weighting factor; a PSK decoder (270) restoring the second information symbols (mDP);

C) means (265) of calculating the average energy of the correlation peaks over a determined duration corresponding to several information symbols, this average forming the said weighting factor, the output of these means (265) being connected to the weighting circuits (231, …, 22M) of the various channels and the circuit (130) for weighting the energy of the correlation peaks.